

64.—STATISTICS RESPECTING CERTAIN FEATURES OF THE VESSEL FISHERIES OF THE UNITED STATES.

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INTRODUCTORY NOTE.

The statistical information presented herewith was prepared during the years 1886, 1887, and 1888, chiefly in response to requests from Congress, the Executive Departments, and the International Fisheries Commission. In several cases the tables have been modified somewhat and made more comprehensive than they were originally.

It is believed that the presentation of preliminary tables in this form (as distinct from the general fishery statistics of the years referred to), some of them being novel in arrangement and covering many branches and phases of the vessel fisheries, will furnish much that is valuable and instructive to all who are interested in the subjects considered. And also, while a clear conception may thus be gained of the matters dealt with, the peculiar and specific kind of information required by the executive and legislative branches of the Government will be apparent.

The data on which the tables are based were procured chiefly by special investigation and correspondence by the U. S. Fish Commission and by returns forwarded by collectors of customs on Treasury circular for obtaining statistics of the fisheries.

EXPLANATION OF TABLES.

Table I shows, by customs districts and States, the number and citizenship of men on vessels employed in the New England food-fish fisheries in 1886, including lobster and menhaden, but not including oyster and other shell-fish. The men engaged on lobster and menhaden vessels numbered 538; 515 of whom were Americans, 2 British provincials, and 21 other foreigners.

Table II relates to the vessels employed in the cod-fisheries that, during the year 1886, frequented grounds east of longitude 65° west. The fleets on each of the distant off-shore banks are enumerated; and the vessels carrying hand-lines or trawls, or both, are shown separately.

In Table III the vessels following the cod and halibut fisheries on off-shore grounds in 1886 are classified according to the localities in which the greater part of their catch was obtained, and also with reference to the kinds of bait used and the source of the bait supply. Each vessel is shown under the ground on which its principal fishing was done, thus explaining any apparent contradiction of Table II, which gives the fleets on the separate grounds. In winter, the vessels fishing for halibut, and those engaged in the cod-fishery on George's, Brown's,

La Have, and Western banks, usually take supplies of frozen-herring bait from the home ports.

Table IV shows the New England fleet engaged in the off-shore cod and halibut fisheries in the year 1888, dividing them according to their hailing ports and fishing grounds. The total number of vessels is shown to have been 370, of which 305 were owned in the State of Massachusetts, 60 in Maine, and 5 in Connecticut. One hundred and two of the vessels fished exclusively on the Grand Bank, and 63 others visited that ground at some period in the year.

Table V gives the number of American fishing vessels entering British North American ports, including those of Newfoundland, together with the number of times said ports were visited by the vessels in the several fisheries, and the amount of money expended by them for bait, ice, provisions, repairs, etc., during 1885, the last year of the continuance of the so called Washington treaty. In addition to the expenditures incurred on the part of the vessels, the crews disbursed greater or less amounts, aggregating \$16,800, an estimate based on the assumption that each man would spend only \$5 during the season. The average number of times that each vessel entered foreign ports in 1885 was five.

Table VI shows that in 1886 5,137 barrels of clam-bait, valued at \$28,230, and in 1887 4,430 barrels, valued at \$24,440, were shipped from Maine to be used by the provincials. Sedgwick, Deer Isle, and the vicinity of Portland are the centers of this trade. A large portion of the clam-bait received at Portland is transhipped by way of Boston, the custom-house records of which city show that in 1886 1,905 barrels, and in 1887 1,313 barrels, valued at \$9,789 and \$9,102, respectively, were exported to the provinces.

The mackerel fishery is treated of in four tables (VII to X).

Table VII shows, by customs districts, the quantity of mackerel caught by the New England fleet in 1886, with the fishing grounds on which the fish were taken. Three hundred and thirty-eight vessels used purse-seines; these schooners are generally of large size, ranging from 40 to 140 tons, and carrying from 10 to 20 men. The 149 vessels using hand-lines and nets vary in size from 5 to 70 tons, but are generally small craft, with from 2 to 13 men. They fished along the coast of the United States with more or less regularity during the summer months. Three fished in the Gulf of St. Lawrence with hand-lines; these were the schooners *M. L. Wetherell* and *William V. Hutchins*, of Gloucester, and *G. M. Hopkins*, of Provincetown.

The total catch of mackerel in 1886 was 130,170 barrels, of which 38,583 barrels were sold fresh and 91,587 barrels were brine-salted. The catch of the Southern fishery amounted to 19,812 barrels, of which all but 3,676 barrels were sold fresh, chiefly in New York. The New England shore yielded 39,303 barrels, of which 21,687 barrels were disposed of in a fresh state. The catch on the Nova Scotia shore and in the Gulf of St. Lawrence included more than half of the total product

of the fleet, aggregating 71,055 barrels, of which 760 barrels were landed fresh in Portland. The vessels fishing with hand lines and nets secured 39 barrels of fresh mackerel and 27 barrels of salt mackerel in the Southern spring fishery; 3,357 barrels of fresh and 2,142 barrels of salt fish off the New England shore, and 191 barrels of salt mackerel in the Gulf of St. Lawrence. The total value of the mackerel taken by the fleet in 1886 was about \$1,716,372.

The extent of the mackerel fishery in 1887 is given in Table VIII, which shows, in addition to the number of vessels and the catch, as set forth in Table VII, the aggregate tonnage and value of the vessels in each district, together with the number and citizenship of the men employed in the fishery and the value of the catch by districts. The table includes all vessels that during any portion of the year fished especially for mackerel. The mackerel catch of vessels not regularly engaged in the fishery is shown in a foot-note.

The extent of the American mackerel-fishery in the Gulf of St. Lawrence in 1887 is presented in Table IX. The average catch per vessel, only 98 barrels, is considerably less than half the average catch of vessels fishing on the American shore, which was 220 barrels in 1887. A list of the vessels, 178 in number, which entered the Gulf for mackerel, follows the table, the arrangement being alphabetical under ports.

The information contained in Table X was furnished by Messrs. D. L. Fernald & Co., of Portland. It shows the quantity and value of salt mackerel packed at Portland in 1887, with the percentage of same caught in the Gulf of St. Lawrence. The table includes all salt mackerel packed in Portland, regardless of where the vessels landing the fish were owned. The six packers handled 9,940 barrels, valued at \$140,144.40; of which 2,198 barrels, valued at \$26,407, were taken in the Gulf of St. Lawrence by 40 vessels that fished from six to twenty weeks in those waters; the average time being nine weeks, and the average catch 55 barrels.

In Tables XI, XII, and XIII the New England lobster-vessel fishery in 1887 is dealt with, the first table relating to Maine, the second to the other States having lobster fisheries, while the third is a condensed statement for the whole of New England. Reference to the tables, which give the statistics in great detail, shows, among other things, that Maine leads the other States in the number of vessels engaged in the fishery, the tonnage of same, the number of men employed, and the number and value of the lobsters transported; and that Connecticut is second to Maine in all these respects, and excels in the value of the vessels and outfits, and the number and value of the lobsters actually caught by the vessels' crews. The total output of this fishery was 1,960,939 lobsters, of which 639,294, valued at \$49,908, were caught by the crews of the vessels; while the remaining 1,321,645, valued at \$70,399, were caught by men

fishing in small open boats along the shores adjacent to their homes, and were merely purchased by the vessels and transported by them to the city markets.

In Table XIV a comparative statement is furnished of the extent of the menhaden fishery in 1880 and 1886, the former figures obtained by agents of the U. S. Fish Commission for the Tenth Census, the latter by special field investigations of the Commission. Reference to the table discloses certain features of the fishery the mention of which will be of interest.

Number of factories.—The State having the largest number of factories, both in 1880 and 1886, is Virginia, 38 and 37 being the respective figures. A large proportion of the factories in 1880, however, were not in existence in 1886; many of those operating in the latter year representing new capital invested or a change in the location of plants.

Massachusetts, Rhode Island, Connecticut, New York, and New Jersey show a decrease in the number of factories, while whatever increase took place was south of New Jersey, and the increase was really more than can be judged from a bare statement of the number of factories, as is shown by the greatly augmented amount of capital invested in the Southern States. A noticeable impetus to the industry in the South, partially compensatory with its decline in the North, is seen in the number of works in 1886 in North Carolina, where in 1880 there were none.

Number of vessels.—Fewer steam and sail vessels were employed in 1886 than in 1880. Vessels of finer build, larger size, and with more men, however, made up for fewer numbers in 1886. While in 1880 the average value of steamers was \$8,160, in 1886 it was \$10,095. The value of sailing vessels shows a corresponding increase, the average in 1880 being \$835 and in 1886 \$1,425.

Number of men.—More men in the capacity of factory hands and fishermen were employed in 1886, notwithstanding the smaller number of factories and vessels.

Capital invested.—The total investment in 1880 was \$2,061,654; in 1886 it was \$2,921,632, or an increase of \$859,978, made up chiefly of improved machinery and other shore property.

The yield of the fishery.—In 1886 the quantity of menhaden taken was less by 1,105,825 barrels, or about 368,608,000 fish, than in 1880. The yield of oil in the latter year was at the rate of 3 gallons to a thousand fish, and in 1886 averaged 5½ gallons; the actual increase in oil amounting to 914,878 gallons. The production of fertilizer was less in 1886 than in 1880 by 27,281 tons. The total value of the output of the fishery was \$2,116,787 in 1880 and \$1,517,330 in 1886; the decrease in the latter year being \$599,457.

Table XV shows the average quantity of fish taken per vessel and per man, for the years 1879, 1880, 1885, 1886, 1887, and 1888, of 20 vessels belonging at ports in the State of Maine, and employed in the cod fisheries of Quereau, Western, and Grand banks.

Tables XVI to XX give comparative statistics for several different years of the operations of vessels hailing from New England ports and engaged in the cod or the market fisheries.

Table XVI shows the average catch per vessel and per man, for the years 1879, 1885, 1886, 1887, and 1888, of 20 Gloucester vessels engaged in the George's cod-fishery, and 20 others in the Grand, Western, and Quereau banks cod-fishery. The figures given show that the catch of the average bank vessel was from 7,000 to 40,000 pounds larger in 1888 than in 1879, and the catch per man had increased during the same period by from 1,000 to 4,000 pounds, except in the George's cod-fishery, where there was a falling off of 1,265 pounds in that particular. The cod-fishery seems to have been most successful in 1886 on George's Bank, while on the other banks, although the increase in the quantity taken by each vessel is most marked for 1887 and 1888, the catch per man was largest in 1885.

Table XVII shows the average annual catch per vessel and per man, from the years 1885 to 1888, of 14 vessels belonging to Provincetown, Massachusetts, and employed in the cod-fisheries on Quereau, Western, and Grand banks. The figures given show that the average catch of each vessel in 1887 was 3,350 pounds greater than in 1885, and the average to each man had increased by 816 pounds during the same period; but the year 1888 was a less fortunate one, and the averages were 4,205 pounds to a vessel and 2,722 pounds to a man below what they had been in 1885. The apparent disproportion between the decrease per vessel and per man is due to the fact that the crews carried in 1888 numbered more men than in 1885.

Table XVIII shows the American cod-fishery in the Gulf of St. Lawrence between 1885 and 1888, inclusive. For a number of years the only American vessels entering the Gulf of St. Lawrence for the purpose of taking fish other than mackerel have belonged at the port of Provincetown, and these have fished only for cod, chiefly with trawls. It will be seen from the table that the average catch of these vessels in so-called Canadian waters is very much less than the catch of other vessels following the cod-fishery on the ocean banks.

Table XIX shows the largest catch of a single vessel and average catch and stock of 20 vessels of the fleet engaged in the Boston market fishery between 1885 and 1888, inclusive. The catch consists of cod, haddock, pollock, etc., and is marketed fresh in Boston. The Boston market schooners are among the finest and largest of the New England fishing fleet, and are specially noted for speed. Their average net tonnage is 84.45 tons, and the average number of men constituting a crew is 17.

Table XX shows the largest individual catch and the average catch and stock of 16 vessels, chiefly welled smacks, engaged in the market fishery from the port of Greenport, New York, taking chiefly cod and bluefish, with trawls and hand-lines, and landing their catch in New

York City. The average tonnage of the vessels is 43.33 net, and 9 men constitute the average crew.

Table XXI shows the vessel fishery for the year 1887, of the customs district of Philadelphia, comprising the ports of Philadelphia, Pa., and Camden, N. J. Oystering is the most important fishery interest of the district, 77 vessels out of the entire fleet of 90 vessels being engaged in the oyster fishery, while 4 other vessels followed both fishing and oystering. Four vessels fishing only and 5 transporting fish complete the enumeration. The vessels had an aggregate value of \$184,651, including apparatus and outfit, and carried 515 men. The value of the fishery products taken and transported was \$335,179, of which \$264,029 represented oysters and \$71,150 fish.

TABLE I.—Number and nationality of men on vessels employed in New England food-fisheries in 1886.

Customs district.	American citizens.	British provincials.	Other foreigners.	Total number of men on vessels.	Percentage of American citizens.	Percentage of British provincials.	Percentage of other foreigners.
MAINE.							
Passamaquoddy	93	34	.....	127	73.0	27.0	.....
Machias	81	.....	.....	81	100.0	.....	.....
Frenchman's Bay	310	43	4	357	87.0	12.0	1.0
Castine	429	42	.....	471	91.0	9.0	.....
Bangor	4	.....	.....	4	100.0	.....	.....
Belfast	352	4	.....	356	99.0	1.0	.....
Waldoborough	438	4	.....	442	99.0	1.0	.....
Wiscasset	300	113	.....	413	73.0	27.0	.....
Bath	26	1	.....	27	96.0	4.0	.....
Portland	1,211	151	15	1,377	89.0	10.0	1.0
Saco	24	1	.....	25	96.0	.....	4.0
Kennebunk	60	.....	.....	60	100.0	.....	.....
York	11	.....	.....	11	100.0	.....	.....
Total	3,339	393	19	3,751	89.0	10.5	.5
NEW HAMPSHIRE.							
Portsmouth	180	12	4	146	89.0	8.0	3.0
MASSACHUSETTS.							
Newburyport	49	4	.....	53	92.0	8.0	.....
Gloucester	3,365	1,102	726	5,193	65.0	21.0	14.0
Salem and Beverly	113	26	.....	139	81.0	19.0	.....
Marblehead	251	2	2	255	98.0	1.0	1.0
Boston	589	106	84	759	75.0	14.0	11.0
Plymouth	58	3	.....	61	95.0	5.0	.....
Barnstable	940	604	869	2,413	39.0	25.0	36.0
Nantucket	14	.....	.....	14	100.0	.....	.....
Edgartown	25	.....	.....	25	100.0	.....	.....
New Bedford	78	.....	25	103	76.0	.....	24.0
Total	5,462	1,847	1,706	9,015	60.6	20.5	18.9
RHODE ISLAND.							
Newport	341	.....	.....	341	100.0	.....	.....
Bristol and Warren	6	.....	.....	6	100.0	.....	.....
Providence	22	2	.....	24	83.0	17.0	.....
Total	369	2	.....	371	99.5	.5	.....
CONNECTICUT.							
Stonington	284	.....	17	301	94.0	.....	6.0
New London	297	.....	49	346	86.0	.....	14.0
New Haven	8	.....	.....	8	100.0	.....	.....
Total	589	.....	66	655	89.9	.....	10.1
Grand total	9,889	2,254	1,795	13,938	70.9	16.2	12.9

TABLE II.—*The New England cod fleet fishing east of longitude 65° west in 1886.*

Locality where fishing.	Vessels carrying hand-lines only.	Vessels carrying trawls only.	Vessels carrying both hand-lines and trawls.	Total.
A. Vessels fishing for cod only:				
Grand Bank exclusively	47	9		56
Grand and Western banks	5	4		9
Grand Bank and banks west of longitude 65° W.			2	2
Western Banks exclusively	40	3	2	54
Western Banks and banks west of longitude 65° W	74			74
Total	175	16	4	195
B. Vessels employed in cod and other fisheries during the year, but when in the cod-fishery, at times fishing east of longitude 65° W.:				
Grand Bank exclusively		6		6
Grand and Western banks	1	7	3	11
Grand Banks and banks west of longitude 65° W	1	6		7
Western Bank exclusively	15	2		17
Western Banks and banks west of longitude 65° W	6	4	3	13
Total	23	25	6	54

NOTE.—Vessels mentioned as having fished a portion of the year west of longitude 65° west are those which engaged for a short time in either the market fishery or the so-called George's cod-fishery. The term Western Banks should, in every case, be understood to include not only Western Bank proper, but also Quereau and La Have.

TABLE III.—*The New England off-shore cod and halibut fleets in 1886, classified according to fishing-grounds and bait supply.*

Fishery.	Fishing-grounds.	Vessels.	Fresh bait.	
			Kinds used.	Whence obtained.
Cod.....	Grand Bank	95	Herring, capelin, mackerel, and squid, and occasionally Bank clams, cod-roe, birds, and porpoise.	Chiefly Newfoundland; also New England and Nova Scotia occasionally on banks.
Do...	Quereau and Western banks.	80	Herring, mackerel, and squid.	New England, Nova Scotia, and occasionally New Brunswick.
Do...	George's and Brown's banks.	180	Herring, alewives, menhaden, mackerel, and squid.	New England, New Brunswick, Nova Scotia, and occasionally Long Island, N. Y.
Halibut..	La Have, Western, Quereau, Grand, Green, and St. Pierre banks.	55	Herring, mackerel, cod, haddock, and refuse fish taken on trawls.	Chiefly New England, but sometimes Nova Scotia for first days of fishing; afterwards on banks.
Do...	Off Greenland and Iceland.	6	Chiefly halibut, but also cod and refuse fish taken on trawls.	Caught by crew.
• Salt bait.				
Fishery.	Fishing-grounds.	Vessels.	Proportion of the vessels using salt bait.	Kinds used.
Cod.....	Grand Bank.....	95	Three-fifths	Squid and clams; occasionally herring and capelin.
Do...	Quereau and Western banks.	80	One-half	Squid and clams.
Do...	George's and Brown's banks.	180	None	
Halibut..	La Have, Western, Quereau, Grand, Green, and St. Pierre banks.	55	...do	
Do...	Off Greenland and Iceland.	6	All for first two or three days fishing.	Chiefly herring.

NOTE.—Bait such as bank clams, cod-roe, birds, halibut, porpoises, etc., obtained on the banks, is usually called "shack," and the capture of fish with such lures is denominated "shack fishing." Squid, capelin, or herring taken in quantities on the banks are not included among the material known as shack.

TABLE IV.—Off-shore vessel fleet of New England in 1888, by hailing ports and fishing-grounds.

Customs district.	Fisheries in which the vessels are employed.	Grand Bank only.	Grand Bank and other banks east of Cape Sable.	Grand Bank and banks west of Cape Sable.	Banks east of Cape Sable, excluding the Grand Bank.	Banks west of Cape Sable.	Both on banks east and west of Cape Sable, excluding the Grand Bank.	Total number of vessels fishing on Grand Bank.	Total number of vessels engaged in off-shore bank fisheries.
Frenchman's Bay Castine Belfast Waldoborough. Wiscasset. Portland.	Cod	11			1			11	12
	do	16						16	16
	do				1			1	2
	do				2			2	2
	do				15		1	16	16
	do				13			13	13
	Total for Maine	27			32		1	27	60
Gloucester	Cod	15	20	27	14	92	30	62	198
	Halibut	13	7	1	*6	1	1	21	28
	Cod and halibut		5		1	3	1	5	10
	Total	28	32	28	21	90	31	88	236
Salem and Beverly. Marblehead	Cod	3				1		3	4
	do					1		1	1
Boston	do					2	1		3
	Cod and halibut					1		1	1
	Total					3	1		4
Barnstable	Cod	44	3		3	4	1	47	55
	Cod and halibut					4		4	4
	Total	44	3		3	8	1	47	59
New Bedford	Cod					1			1
	do	62	23	27	18	100	32	112	262
	Halibut	13	7	1	6	1		21	28
	Cod and halibut		5		1	3	1	5	15
	Total for Massachusetts	75	35	28	25	109	33	138	305
Stonington New London	Halibut					1			1
	do					3	1		4
	Total for Connecticut					4	1		5
	Cod	89	23	27	60	100	33	139	322
	Halibut	13	7	1	6	5	1	21	23
	Cod and halibut		5		1	3		5	15
	Grand total	102	35	28	57	113	35	165	370

* Iceland.

TABLE V.—Transactions of American fishing vessels in foreign ports in 1885.

State and district.	Number of ves- sels entering for- eign ports.				Number of times entering foreign ports.			Amounts expended.					
	In cod fishery.	In mackerel fishery.	In halibut and other fishery.	Total.	Cod vessels.	Mackerel vessels.	Halibut and other vessels.	Total.	For bait.	For ice.	For provisions and gear.	For repairs and other purposes.	Total
Maine :													
Portland district	12	2	3	17	48	4	17	73	\$690	\$53	\$376	315	\$1,434
Other districts	19	5	11	35	429	4	40	482	478	57	386	525	1,446
Massachusetts :													
Gloucester	36	38	35	159	364	232	152	748	17,153	2,625	19,557	14,726	54,061
Barnstable district	18	3		21	29	3		32	335	98	1,161	976	2,570
Other districts	6	1	1	8	13	3	5	23	563	167	889	1,482	3,111
Total	141	49	50	240	885	250	223	1,358	19,219	3,000	22,379	18,024	62,622

TABLE VI.—*Exportation of clam-bait to the British Provinces.*

Place whence exported.	Barrels.		Value.	
	1886.	1887.	1886.	1887.
Sedgwick, Me	650	652	\$3,580	\$3,590
Deer Isle, Me.	700	550	3,850	3,050
Portland, Me., and vicinity.....	3,787	3,228	20,800	17,500
Total.....	5,137	4,430	28,230	24,440

TABLE VII.—*The New England mackerel fishery in 1886.*

Customs district.	Number of ves- sels fishing with—		Southern spring fishery.		New England shore.		Nova Scotia shore and Gulf of St. Lawrence.	
	Purse seines.	Hooks, nets, and traps.	Sold fresh.	Brine- salted.	Sold fresh.	Brine- salted.	Sold fresh.	Brine- salted.
Passamaquoddy	1	.....	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>
Frenchman's Bay.....	8	4	145	.....	100	73	.....	364
Castine	9	1	445	130	91	232	.....	.....
Belfast	15	6	.....	364	125	1,045	.....	1,545
Waldoborough.....	6	27	89	.....	7	462	.....	3,015
Wiscasset	18	7	929	60	1,348	821	.....	500
Portland.....	45	4	4,058	461	441	468	.....	1,418
Kennebunk.....	.....	2	.....	.....	2,417	3,590	760	5,888
Portsmouth.....	4	1	200	.....	17	24	.....	.....
Newburyport.....	2	1	.....	.....	1,448	150	.....	.....
Gloucester.....	122	19	9,250	770	200	.....	252	.....
Salem and Beverly.....	.....	1	.....	.....	2,379	3,510	.....	48,123
Marblehead.....	13	1	.....	.....	7	.....	.....	.....
Boston.....	23	2	370	511	6,175	296	.....	.....
Plymouth.....	2	1	.....	8	1,944	1,147	.....	8,083
Barnstable.....	73	22	700	1,869	1,003	13	.....	.....
Nantucket.....	.....	3	.....	.....	2,814	4,546	.....	6,032
Edgartown.....	.....	6	.....	3	11	23	.....	.....
New Bedford.....	1	8	.....	.....	5	109	.....	.....
Newport.....	.....	19	.....	.....	69	438	.....	.....
Providence.....	.....	2	.....	.....	422	434	.....	.....
Stonington.....	.....	6	.....	.....	86	20	.....	.....
New London.....	1	4	.....	.....	519	2	.....	.....
Total.....	338	149	16,136	3,676	21,687	17,616	760	70,204

TABLE VIII.—The New England mackerel fishery in 1887.

Customs district.	Vessels.				Men.				Catch.			
	Using purse seines.	Using nets and hand-lines.	Net tonnage.	Value of vessels.	Value of apparatus and outfit.	Americans.	British provincials.	Other foreigners.	Total.	Sold fresh.	Brine-salted.	Value of catch.
MAINE.												
Passamaquoddy	1		92.48	\$8,000	\$2,000	14			14	Bbls. 155	Bbls. 5	\$1,705
Frenchman's Bay		1	41.00	3,000	700				7			53
Castine	8		549.98	25,200	16,200	103	21		124	2,144	2,639	26,839
Belfast	13		828.07	37,700	17,830	166	33	2	191	66	1,667	20,941
Waldoborough	2	14	307.19	25,650	925	70			70	978	95	11,539
Wiscasset	11	1	766.80	57,000	16,300	149	21		170	629	2,044	29,084
Portland	36	10	3,055.19	210,750	62,770	550	57	18	625	3,831	8,058	150,068
Kennebunk		1	6.50	400	400	3			3		16	155
Total	71	27	5,647.21	367,700	122,125	1,052	132	20	1,204	5,515	14,168	240,384
NEW HAMPSHIRE.												
Portsmouth	4	1	218.40	14,850	6,325	44	4	2	50	805	248	9,250
MASSACHUSETTS.												
Newburyport	1	1	57.13	2,600	2,506	17			17	23	200	2,250
Gloucester	132	33	10,957.12	656,805	382,490	1,535	590	155	2,280	10,993	47,171	625,278
Salem and Beverly		3	36.87	850	260	8	1		9		85	938
Marblehead	13	1	695.48	46,300	15,600	165	3		168	6,710	500	50,722
Boston	16	6	1,189.17	73,700	26,425	164	58	44	266	2,140	5,287	69,684
Plymouth	2		145.37	7,000	2,700	26			26	268	60	3,120
Barnstable	60	28	4,863.01	223,000	92,265	855	150	58	1,063	4,721	20,896	272,077
Nantucket		1	5.34	400	65	3			3	6	15	340
Edgartown		5	70.16	5,800	1,675	19			19	200	203	2,243
New Bedford	1	11	158.93	6,650	1,555	27	20	2	49	315	382	8,570
Total	225	89	18,178.56	1,023,105	525,535	2,819	822	259	3,900	25,376	74,799	1,035,222
RHODE ISLAND.												
Newport	17		189.87	20,900	610	53			53	179	1,453	20,563
Providence		1	10.07	300	50	4			4	29		250
Total	17	1	199.94	21,200	660	57			57	208	1,453	20,813
CONNECTICUT.												
Stonington	2		32.33	1,700	400	6			6	204		1,785
New London	1	4	135.08	7,550	2,585	18	10		28	103	368	5,132
Total	3	4	167.41	9,250	2,985	24	10		34	307	368	6,917
Grand total	301	141	24,411.54	1,436,105	657,630	3,996	968	281	5,245	32,211	91,036	1,312,566

NOTE.—Twelve other vessels, including one in Connecticut, three in Massachusetts, and eight in Maine, took incidentally 53 barrels of fresh mackerel and 13 barrels of salt mackerel on the New England shore. These were valued at \$531, and are not included in the above figures.

TABLE IX.—The American mackerel fishery in the Gulf of St. Lawrence, 1887.

District.	Vessels.	Net tonnage.	Mack. erel taken.
Portland district, Maine	*22	1,782.04	Barrels. 1,101
Other districts in Maine	19	1,381.41	967
Gloucester district, Massachusetts	109	8,722.83	12,976
Barnstable district, Massachusetts	†15	1,163.91	898
Other districts in Massachusetts	13	959.05	1,490
Total	178	14,010.14	17,432

* Including one New York vessel fishing from Portland.
 † Including one New London vessel fishing from Provincetown.

List of American mackerel vessels entering the Gulf of St. Lawrence in 1887.

Hailing port.	Name of vessel.	Ton- nage.	Hailing port.	Name of vessel.	Ton- nage.
Eastport, Me	Christina Ellsworth	92.48	Gloucester, Mass ..	Harry G. French	95.16
Swan's Island, Me.	Augusta E. Herrick	94.81		Hattie B. West	53.54
	Daniel Simmons	68.27		Hattie L. Newman	93.43
	John Nye	63.58		Hattie N. Woods	84.08
	Robert Pettis	62.31		Henry Dennis	81.55
North Haven, Me...	Alice C. Fox	59.10		Henry Friend	64.02
	Amy Wixon	45.00		Henry Wilson	58.04
	Charles Haskell	62.34		Herald of the Morn- ing	68.05
	Eben Dale	55.00		Howard Holbrook	82.00
	Electric Flash	78.00		Isaac A. Chapman	80.81
	F. H. Smith	70.53		James and Ella	85.75
	Maud S.	75.60		Jennie Seaverns	106.93
Vinal Haven, Me ...	Willie Parkman	73.85		John G. Whittier	99.10
Rockland, Me	Gracie C. Young	83.70		John S. McQuin	77.68
Booth Bay, Me	Ambrose H. Knight	87.04		John W. Bray	79.24
	Caroline Vought	79.79		Joseph Garland	48.87
	Cora Louisa	74.50		Knight Templar	69.60
Southport, Me	Fannie S. Orne	80.78		Lella E. Norwood	74.39
	Sir Knight	76.58		Leona	95.53
Portland, Me	Abbie M. Deering	90.25		Lizzie M. Center	77.64
	A. H. Lenox	68.88		Lizzie W. Hannum	71.35
	Eddie Pierce	91.05		Mabel Leighton	71.00
	Elsie M. Smith	106.95		Maggie and Lilly	77.72
	Emma	77.04		Margaret	44.24
	Ethel and Addie	80.02		Martha C	75.20
	Fannie A. Spurling	81.53		Mary Fernald	76.17
	Fleetwood	53.19		Mary H. Thomas	93.08
	Francis M. Loring	73.20		Mascat	77.06
	Gertie Lewis	68.63		Matthew M. Murray	75.16
	G. W. Brown	61.80		Mattie Winship	73.44
	Hattie Maud	86.82		Maud M. Story	71.73
	Henry Morganthau	85.53		Mayflower	108.18
	James Dyer	81.23		Molly Adams	117.26
	John M. Plummer	95.65		Moro Castle	84.41
	Josephine Swanton	57.70		Nellie M. Davis	89.22
	Lilla B. Fernald	78.36		Nellie N. Rowe	79.06
	Lucy J. Warren	56.05		Oresa	82.47
	Margaret S. Smith	109.13		Orient	89.07
	Mattie T. Dyer	103.48		Ossipee	68.96
	Solitaire	85.64		Pendragon	68.47
Newburyport, Mass ..	Sarah E. Babson	46.64		Phebe and Emma Small	61.34
Gloucester, Mass ..	Ada R. Terry	65.83		Pioneer	62.88
	Albert H. Harding	61.11		Porter S. Roberts	72.00
	Alice C. Jordan	81.96		Ralph E. Eaton	65.52
	A. M. Burnham	60.08		Ralph F. Hodgdon	85.79
	Annie C. Hall	84.42		Rapid Transit	80.25
	Annie H. Frye	64.03		Rattler	78.59
	A. R. Crittenden	81.35		Richard Lester	69.08
	Argonaut	70.30		Robert J. Edwards	80.38
	Barracouta	65.15		Robin Hood	88.23
	Bartie Pierce	90.15		Rushlight	63.63
	Belle A. Nauss	88.70		Sarah P. Ayer	67.81
	Belle Franklin	75.96		Sea Foam	54.90
	Blue Jacket	110.27		Senator Frye	85.14
	Canopus	68.33		Senator Morgan	86.07
	Carrie E. Parsons	80.05		Senator Saulsbury	102.38
	Carrie W. Babson	85.86		S. F. Maker	103.75
	Charles C. Warren	103.43		Shiloh	81.68
	Col. J. H. French	79.03		Starry Flag	56.53
	Commonwealth	81.23		Vesta	75.70
	David A. Story	86.90		Volunteer	66.11
	David F. Law	57.73		Warren J. Crosby	107.90
	Edith Rowe	80.00		William D. Daisley	93.19
	Edward E. Webster	93.86		William H. Foye	66.93
	Eleazar Boynton	84.53		William H. Jordan	86.00
	Electa A. Eaton	73.85		William H. Welling- ton	81.35
	Ellen M. Adams	85.81		William M. Gaffney	70.92
	Enola C	62.02		W. W. Rice	90.13
	Ethel Maud	77.07		Emma W. Brown	73.97
	Fannie Belle	80.21	Rockport, Mass....	Oscar and Hattie	81.28
	Fannie W. Freeman	90.10	Swampscott, Mass.	Paul and Essie	63.54
	Farmer R. Walker	67.93		Andrew Burnham	86.37
	Frank A. Radcliffe	90.01		Charles H. Kelley	65.28
	Frank Foster	56.71		Grover Cleveland	87.78
	Frederick Gerring, Jr	67.34	Boston, Mass	Morning Star	76.43
	Frederick P. Frye	81.10		Neponset	69.84
	Gatherer	90.92		Roulette	79.15
	George Butler	87.87		Sarah H. Prior	97.38
	George F. Edmunds	141.80			
	Gertie Evelyn	81.00			
	G. P. Whittman	60.67			

List of American mackerel vessels entering the Gulf of St. Lawrence in 1887—Continued.

Hailing port.	Name of vessel.	Ton- nage.	Hailing port.	Name of vessel.	Ton- nage.
Boston, Mass	Thetis	47.46	Wellfleet, Mass ...	Mary Steele	66.47
Cohasset, Mass	Charlotte	68.08	Provincetown, Mass.	Alice 1st	84.37
Plymouth, Mass	Hannah Coomer	90.72		Alice 2d	85.06
Wellfleet, Mass	Addie F. Cole	72.39	Orleans, Mass	Gracie H. Benson ...	88.54
	Charles F. Atwood	66.33	Harwich, Mass	Hattie D. Linnell ...	80.27
	Eddie Davidson	77.98		Charlotte Brown ...	79.33
	H. W. Pierce	70.22	New London, Conn.	Kate Florence	96.94
	Lizzie D. Barker	72.14	New York, N. Y...	Frank Butler	70.85
	Lizzie Smith	73.35		Laura Belle	77.91
	Lucie M. Jenkins	69.67			

TABLE X.—The pack of salt mackerel in Portland in 1887.

Name of packer.	Total quantity of salt mackerel packed in Portland.						Portion caught in Gulf of St. Lawrence.					
	Total.		No. 1's (extra).	No. 1's.	No. 2's.	No. 3's (large).	No. 3's.	Vessels packing with these firms that en- tered the gulf.	Average time fishing in Gulf.	Mackerel taken in Gulf.		
	Bbls.	Value.								Bbls.	Value.	
A. M. Smith	1,750	\$25,294.40	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.		W'ks.			
Lewis, Chase & Whitten	1,125	15,800.00	240	478	451	203	378	6	8	107	\$1,207.00	
C. D. Thomas	100	1,400.00	.....	519	377	.....	229	5	6	145	1,800.00
Charles A. Dyer	1,721	24,094.00	.....	20	55	.....	25	1	20	20	230.00
Green & Brower	1,004	14,196.00	.....	504	674	314	229	10	7	682	8,154.00
D. L. Fernald & Co.	4,240	59,360.00	145	384	381	16	98	1	8	12	156.00
			.....	1,333½	2,063½	393½	449½	17	6	1,232	14,780.00
Total	9,940	140,144.40		385	3,218½	4,001½	928½	1,408½	40	7	2,198	26,407.00

NOTE.—Two other firms, not included in the foregoing table, packed a few mackerel, but as they went out of business before the close of the season, it was impossible to get accurate statistics of their pack, which is estimated at about 200 barrels.

TABLE XI.—The Maine vessel fishery for lobsters in 1887.

Customs district.	Hailing port.	Vessels engaged in no other fisheries.				Vessels engaged part of the time in other fisheries.				Total lobster fleet.					Products.					
		Catching lobsters only.	Transporting lobsters only.	Both catching and transporting.	Total.	Catching lobsters only.	Transporting lobsters only.	Both catching and transporting.	Total.	Vessels.	Net tonnage.	Value of vessels.	Value of outfit.	Men.	Lobsters caught by crews of vessels.		Other lobsters transported by vessels.		Total.	
															Number.	Value.	Number.	Value.	Number.	Value.
Machias district, Me	Jonesport			2	2	2	1	3	5	49.56	\$1,175	\$560	16	28,567	\$878	140,750	\$2,224	169,317	\$3,102	
Frenchman's Bay district, Me	Gouldsborough						1	1	1	7.35	400	150	3	5,250	80	192,500	2,670	197,750	2,750	
Castine district, Me	Castine						1	1	1	14.35	300	100	4	6,600	100			6,600	100	
Belfast district, Me	North Haven						1	1	1	10.84	400	75	3	3,000	50			3,000	50	
Waldoborough district, Me ..	St. George		1		1				1	28.59	600	50	2			43,636	3,491	43,636	3,491	
	Cushing		4		4		1	1	5	88.58	2,800	600	11			321,041	17,802	321,041	17,802	
	Rockland					1			1	9.54	400	200	3	4,000	160			4,000	160	
	Friendship	1			1	2	2	5	6	162.23	8,600	900	23	82,651	1,776	68,801	3,495	151,452	5,271	
	Bristol		2		2			1	3	53.01	3,100	300	7	4,000	160	138,375	10,825	142,375	10,985	
	Waldoborough						1	1	1	7.58	125	200	4	10,000	700			10,000	700	
	Damariscotta						1	1	1	5.85	400	50	2	4,000	300			4,000	300	
	Total	1	7		8	5	3	2	10	18	355.38	16,025	2,300	52	104,651	3,096	571,853	35,613	676,504	38,709
Portland district, Me	Portland		3		3	1	3	4	7	140.74	4,225	600	16	4,088	286	315,986	21,758	320,074	22,044	
	Harpawell		1		1			1	1	13.61	400	50	2			37,556	2,984	37,556	2,984	
	Total		4		4	1	3	4	8	154.35	4,625	650	18	4,088	286	353,542	24,742	357,630	25,028	
Saco district, Me	Saco		1		1			1	1	6.72	450	400	3	14,348	500			14,348	500	
	Biddeford						1	1	1	8.75	800	220	9	60,000	4,800			60,000	4,800	
	Total		1		1		1	2	2	15.47	1,250	620	12	74,348	5,300			74,348	5,300	
Kennebunk district, Me	Cape Porpoise						2	2	2	17.24	550	300	7	7,700	380			7,700	380	
	Total for Maine ..	2	11	2	15	13	7	3	23	38	624.54	24,725	4,755	115	234,204	10,170	1,258,645	65,249	1,492,849	75,419

TABLE XII.—The Massachusetts, Rhode Island, and Connecticut vessel fishery for lobsters in 1887.

Customs district.	Hailing port.	Vessels engaged in no other fisheries.				Vessels engaged part of the time in other fisheries.				Total lobster fleet.					Products.					
		Catching lobsters only.	Transporting only.	Both catching and transporting.	Total.	Catching lobsters only.	Transporting only.	Both catching and transporting.	Total.	Vessels.	Net tonnage.	Value of vessels.	Value of outfit.	Men.	Lobsters caught by crews of vessels.		Other lobsters transported by vessels.		Total.	
															Number.	Value.	Number.	Value.	Number.	Value.
Newburyport district, Mass.	Newburyport					1	1	1	1	11.45	\$300	\$100	4			3,000	\$150	3,000	\$150	
Gloucester district, Mass.	Gloucester					1	1	1	1	11.63	600	350	3	3,500	250			3,500	250	
Salem and Beverly district, Mass.	Salem					1	1	1	1	15.58	300	200	4	18,765	2,023			18,765	2,023	
Marblehead district, Mass.	Marblehead					1	1	1	1	12.05	500	100	4	3,500	300			3,500	300	
	Swampscott					1	1	1	1	8.83	800	200	3	7,000	600			7,000	600	
	Total					2	2	2	2	20.88	1,300	300	7	10,500	900			10,500	900	
Boston district, Mass.	Boston	2		2		1	3	52.07	2,250	450	13	25,291	1,770			25,291	1,770			
New Bedford district, Mass.	New Bedford					3	3	35.57	3,500	500	11	42,487	6,560			42,487	6,560			
	Total for Massachusetts.	2		2		8	9	147.18	8,250	1,900	42	100,523	11,503	3,000	150	103,523	11,653			
Newport district, R. I.	Newport	1		1			1	11.33	1,200	300	4	11,000	1,100			11,000	1,100			
Providence district, R. I.	Providence	1		1			1	5.10	300	72	1	450	32			450	32			
	Total for Rhode Island ..	2		2			2	16.43	1,500	372	5	11,450	1,132			11,450	1,132			
Stonington district, Conn.	Stonington	14		14	5	1	6	201.05	15,900	4,000	56	222,384	20,113	10,000	1,000	232,384	21,113			
New London district, Conn.	New London	1	1	2	2		2	81.56	11,700	1,500	16	70,733	6,990	50,000	4,000	120,733	10,990			
	Total for Connecticut.	15	1	16	7	1	8	282.61	27,600	5,500	72	293,117	27,103	60,000	5,000	353,117	32,103			

TABLE XIII.—The New England vessel fishery for lobsters in 1887.

State.	Vessels engaged in no other fisheries.				Vessels engaged part of the time in other fisheries.			
	Catching lobsters only.	Transporting only.	Both catching and transporting.	Total.	Catching lobsters only.	Transporting only.	Both catching and transporting.	Total.
Maine	2	11	2	15	13	7	3	23
Massachusetts	2			2	8	1		9
Rhode Island	2			2				
Connecticut	15		1	16	7	1		8
Total	21	11	3	35	28	9	3	40

State.	Total lobster fleet.				
	Vessels.	Net tonnage.	Value of vessels.	Value of outfit.	Men.
Maine	88	624.54	\$24,725	\$4,755	115
Massachusetts	11	147.18	8,250	1,900	42
Rhode Island	2	16.43	1,500	372	5
Connecticut	24	262.61	27,600	5,500	72
Total	75	1,050.76	62,075	12,527	234

State.	Products.					
	Lobsters caught by crews of vessels.		Other lobsters transported by vessels.		Total.	
	Number.	Value.	Number.	Value.	Number.	Value.
Maine	234,204	\$10,170	1,258,645	\$65,249	1,492,849	\$75,419
Massachusetts	100,523	11,503	3,000	150	103,523	11,653
Rhode Island	11,450	1,132			11,450	1,132
Connecticut	293,117	27,103	60,000	5,000	353,117	32,103
Total	639,294	49,908	1,321,645	70,399	1,960,939	120,807

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TABLE XIV.—The menhaden fishery in 1886 compared with 1880.

State.	Factories.	Fishermen.	Factory hands.	Total number of men.	Steamers.	
					Number.	Value.
Massachusetts:						
1880.....	1	251	20	271	*12	\$97,500
1886.....						
Rhode Island:						
1880.....	7	416	192	608	18	141,500
1886.....	3	291	178	469	13	156,500
Connecticut:						
1880.....	7	504	127	631	19	146,000
1886.....	5	152	102	254	7	93,000
New York:						
1880.....	26	756	325	1,081	30	270,000
1886.....	15	673	513	1,186	32	349,800
New Jersey:						
1880.....	12	174	130	304	1	3,000
1886.....	11	187	146	333	2	25,000
Delaware:						
1880.....	1	8	3	11		
1886.....	2	30	70	100	2	20,000
Maryland:						
1880.....	1	15	6	21		
1886.....	3	89	59	148		
Virginia:						
1880.....	38	419	289	708	1	3,000
1886.....	37	1,045	605	1,650	9	48,500
North Carolina:						
1880.....						
1886.....	6	252	83	335	2	13,600
Total:						
1880.....	93	2,543	1,092	3,635	81	861,000
1886.....	82	2,719	1,756	4,475	67	878,400

State.	Sail vessels.		Total capital invested.	Menhaden caught.	Oil made.	Scrap prepared.	Total value of products.
	Number.	Value.					
Massachusetts:				<i>Barrels.</i>	<i>Gallons.</i>	<i>Tons.</i>	
1880.....	*23	\$8,900	\$179,105	13,030	50,400	1,971	\$61,769
1886.....							
Rhode Island:							
1880.....	43	20,550	304,800	843,469	270,482	10,590	221,748
1886.....	6	4,500	393,780	245,727	661,334	5,620	253,364
Connecticut:							
1880.....	53	25,950	392,370	325,460	256,300	0,000	256,205
1886.....	8	3,050	103,480	66,440	134,878	1,933	70,755
New York:							
1880.....	117	121,750	819,090	1,444,456	1,186,682	32,210	1,114,158
1886.....	22	29,450	985,097	501,683	1,055,139	12,123	542,008
New Jersey:							
1880.....	30	32,400	129,250	145,323	87,747	4,545	148,286
1886.....	24	24,500	223,300	93,198	200,104	2,650	98,340
Delaware:							
1880.....			1,700	2,499	450	15	941
1886.....			116,850	98,886	298,880	2,875	116,750
Maryland:							
1880.....	3	2,900	12,775	19,515	10,575	300	11,850
1886.....	14	25,600	66,670	33,642	41,025	1,129	31,600
Virginia:							
1880.....	101	87,200	222,164	441,069	203,760	10,273	308,829
1886.....	148	238,500	893,615	523,623	512,623	13,861	355,500
North Carolina:							
1880.....							
1886.....	26	26,800	108,840	65,787	77,240	1,432	49,013
Total:							
1880.....	370	308,650	2,061,654	2,734,821	2,066,396	68,904	2,116,787
1886.....	248	352,400	2,921,632	1,628,996	2,981,274	41,023	1,517,330

* These vessels were owned in Massachusetts, but the majority of them were engaged in fishing for factories in Rhode Island and New York.

TABLE XV.—Average catch, by years, of vessels of Maine employed in the cod-fisheries on Quereau, Western, and Grand banks.

Year.	Average catch per vessel.	Average catch per man.
	<i>Pounds.*</i>	<i>Pounds.*</i>
1879.....	136, 701	10, 278
1880.....	142, 548	10, 718
1885.....	225, 660	15, 780
1886.....	235, 441	15, 044
1887.....	237, 080	15, 441
1888.....	243, 390	13, 415

*These figures represent the weight of the fish after being dried for market.

TABLE XVI.—Average catch, by years, of Gloucester vessels engaged in off-shore cod-fishery.

Year.	George's cod-fishery.		Grand, Quereau, and Western banks cod-fishery.	
	Average catch per vessel.	Average catch per man.	Average catch per vessel.	Average catch per man.
	<i>Pounds.*</i>	<i>Pounds.*</i>	<i>Pounds.*</i>	<i>Pounds.*</i>
1879.....	288, 182	22, 073	235, 444	17, 904
1885.....	228, 311	18, 510	350, 874	20, 087
1886.....	282, 065	23, 328	322, 879	23, 563
1887.....	245, 684	20, 533	300, 098	24, 400
1888.....	247, 967	20, 808	374, 251	22, 308

*These figures represent the weight of the fish as landed by the vessels before being dried for market.

TABLE XVII.—Average catch, by years, of vessels of Provincetown, Mass., employed in the cod-fisheries on Quereau, Western, and Grand banks.

Year.	Average catch per vessel.	Average catch per man.
	<i>Pounds.*</i>	<i>Pounds.*</i>
1885.....	335, 655	17, 087
1886.....	331, 685	17, 195
1887.....	344, 005	17, 903
1888.....	331, 450	15, 365

*These figures represent the weight of the fish after being dried for market.

TABLE XVIII.—American cod-fishery in the Gulf of St. Lawrence.

Year.	Vessels.	Net tonnage.	Salt cod taken.	Value.
			<i>Pounds.</i>	
1885.....	5	300. 58	544, 320	\$14, 350
1886.....	2	127. 97	250, 880	6, 800
1887.....	3	190. 40	395, 600	13, 177
1888.....	3	190. 40	316, 760	12, 600

TABLE XIX.—Largest and average catch, by years, of vessels of Boston, Mass., engaged in the market fishery.

Year.	Largest catch.	Average catch.	Average stock.
1885	<i>Pounds.</i> 1,465,000	<i>Pounds.</i> 782,775	\$11,933
1886	1,534,000	864,737	11,320
1887	1,430,000	875,359	16,378
1888	1,550,000	997,683	16,965

TABLE XX.—Largest and average catch, by years, of vessels of Greenport, N. Y., engaged in the market fishery.

Year.	Largest catch.	Average catch.	Average stock.
1885	<i>Pounds.</i> 257,000	<i>Pounds.</i> 201,000	\$7,782
1886	353,500	200,552	7,187
1887	284,770	185,037	6,807
1888	287,000	211,950	10,811

TABLE XXI.—The vessel fishery of the Philadelphia customs district in 1887.

	Number.	Net tonnage.	Value of vessels.	Value of apparatus and outfit.	Men.	Value of products.		
						Oysters.	Fish.	Total.
PHILADELPHIA, PA.								
Vessels oystering	48	1,140.63	\$81,161	\$11,365	271	\$150,819		\$150,819
Vessels fishing	4	112.12	7,600	2,100	43		\$15,000	15,000
Vessels both oystering and fishing	4	122.31	13,850	1,550	37	19,000	10,200	29,200
Vessels transporting fish								
Total	56	1,375.06	102,611	15,015	351	169,819	25,200	195,019
CAMDEN, N. J.								
Vessels oystering	29	626.49	59,400	3,675	150	94,210		94,210
Vessels fishing								
Vessels both oystering and fishing								
Vessels transporting fish	5	74.83	3,700	250	14		45,950	45,950
Total	34	701.32	63,100	3,925	164	94,210	45,950	140,160
TOTALS FOR DISTRICT.								
Vessels oystering	77	1,767.12	140,56	15,040	421	245,029		245,029
Vessels fishing	4	112.12	7,600	2,100	43		15,000	15,000
Vessels both oystering and fishing	4	122.31	13,850	1,550	37	19,000	10,200	29,200
Vessels transporting fish	5	74.83	3,700	250	14		45,950	45,950
Grand total	90	2,076.38	165,711	18,940	515	264,029	71,150	335,179